

parture was accomplished very simply. At about 11:15 A. M. he climbed to the edge of the nest and attempted to jump to a twig a short distance away. He fell short and tumbled to the ground without injury. At this time the parents appeared and coaxed him off into the thick underbrush in the ravine. The next morning both of the others were gone from the nest. In nests B and C the young all died before they were old enough to leave.

Marshalltown, Iowa.

BIRD NOTES FROM THE SOUTH-WEST.

BY J. L. SLOANAKER

It was with no little delight at the thought of new friends to be made in a new bird-world, that the writer prepared to leave his home in central Iowa during the intensely cold weather of middle January, 1912, and seek the warm sun and dry cactus covered sands of southern Arizona. Tucson, the metropolis of Arizona, and situated only 70 miles from the Mexican line, was our goal; and the period from January 25 to April 25 — the Arizona springtime — our stay.

Bird lovers who are wont to travel occasionally, especially those who come from the East and go into the far West or South, are indeed treated to a wealth of strange sights and new forms in the scientific world, pleasures which are not vouchsafed those who must remain in their home bird-world, but which, fortunately, can be partially enjoyed through the recorded experience of others. Stories concerning the great South-west had always intensely interested us, and we departed with a resolution not to permit other duties to rob us of the time necessary to experience as much as possible. And although there is more recorded information from Tucson than from any other part of the South-west we present our notes herewith, hoping that we may add something of interest.

By the 20th of January we were off and away, eagerly

scanning the stretches of new country which unfolded themselves as the train proceeded and straining our eyes, already half blinded by the dazzling snow, to catch a glimpse of any new bird that might be within range. Our interest was soon rewarded by the sight of numerous birds that in this day rarely breed in central Iowa, although rather common during certain winters, namely, the Prairie Chicken (*Tympanuchus americanus americanus*), most of which have probably gone to help decrease (?) the cost of living. Our railroad followed a creek and then a river, through a country composed of woodland and cornfields, and at almost every siding corn was being loaded into cars. Here there was much waste of corn on the ground, and after the train and wagons had departed, the "chickens" flew up to feast. One small tree in the edge of a pasture and the ground underneath was black with the birds, and from the great numbers seen we concluded that they were present in the greatest numbers in recent years.¹

In the Centerville, Iowa, district, and from thence southwest to Kansas City the Rock Island takes us through a country underlaid with coal and chopped by deep, wooded ravines, an ideal country for hawks and owls. We wished that we could tarry a while to hunt them up, but the train rushed on as we dreamed of the rare finds we might have made could we have stopped there. Early the next day we were at Hutchinson, Kansas, noted for its saltworks, as is also Salina (hence the name). As we rushed onward we dreamed again, this time of the ancient days in Kansas when its billowy surface was the bed of an inland sea, where lived *Hesperornis* and others of its kind, in a world of their own, only recently (1873) made known to man. How we wished that we could take a side trip to the University museum to "view the remains"! The rest of the day, as we traversed the lonely plains of the Texas Panhandle, we were delighted and saddened in turn as we attempted to identify the hundreds of hawks circling about, low down, when disturbed

¹ More fully discussed in Wilson Bulletin No. 78.

and frightened from their feast — the equally numerous dead bodies of cattle that had perished in the recent blizzard. We closed our eyes upon the dismal scene, thankful that the approaching darkness would soon completely hide it, and that the night's travel would reveal to us a new country, the borderland of summer.

As if to welcome us, as we alighted from the train next morning to stretch our legs in the station yard at El Paso, the friendly though wary Ravens came sailing about, carefully watching the back door of the nearby restaurant with one eye, while with the other they followed the porters carrying supplies to the diner. Always looking for a "scrap"! So we tossed them one from the remains of our lunch and tried to make friends with them, but can only report that Mr. Raven is a very cautious gentleman, speaking his greetings from a distance. Good natured, though, for he accompanied us clear to Tucson, never being out of sight, and aside from the ever-present meadowlarks and blackbirds, the only new bird that we could safely add to our list, in that long stretch of country.

Our goal at last! We could hardly sleep last night, for to-day we will be afield, taking in the sights of "Queen City of Cactusland," and investigating the bird-life of the region. Violets and narcissus are blooming and the cottonwood buds bursting. We are bewildered by the wealth of bird life, and after listing a dozen species new to us and easily recognized, as well as the descriptions of a dozen others — puzzlers — we decided to wend our way to the University Museum, close at hand, for a season of study. Here we found the exhibit of birds second only to that of the Ores, and although mostly collected in 1885-'89 these bird skins are as clean and beautiful as if placed there only yesterday. All this was the work of the genial Mr. Herbert Brown,¹ the pioneer naturalist of that region, who, when we found him (he is a busy man) was most eager to assist us and explain our puzzles. Then

¹ Since deceased.

we unpacked our reference literature,¹ and the preliminary thrills over, were ready for business.

We found Tucson spread over a plain of about 2300 feet altitude, arid and cactus grown, except near the river (so-called!), and vicinity of artificial ponds and ditches. The surrounding mountains with their different zones of life from base to summit, widened the field of exploration for us. The city is in the lower Sonora zone. Creosote bushes abound in every vacant lot in town as well as covering all the adjacent country; the smaller cacti flourish as well, while at a distance are the mesquite groves, live oaks and giant cactus.²

The White-necked Ravens, as before, were the first birds to attract attention;³ to an easterner they strike one as half a crow in size and voice, though not in speed of flight, and as they are protected by law, being valuable scavengers, are abundant and tame. We looked in vain for their white necks, but as the feathers of the neck are white at the base only, this could not be seen except when the wind was blowing hard.

In the afternoon, when hunger has been satisfied, a dozen or more go for a "social sail" high in the air. No trapeze man in a parachute ever performed such amazing feats as these jolly birds, chasing each other, dropping scores of feet with closed wings, turning on their backs with feet up, and even rolling completely over like a barrel, all the time laugh-

¹ Available literature necessary for the sojourner at Tucson: Handbook of Birds of the Western U. S.—Bailey.

List of Southern Arizona Birds.—W. E. D. Scott and Herbert Brown. Found in Introduction of the Handbook.

Notes on the Birds of Pima Co., Arizona.—S. S. Visher. From the Auk, Vol. 27, No. 3. July, 1910.

File of the Condor, as complete as possible. Important specific references are:

Summer Birds of the Papago Indian Reservation, near Tucson, by H. S. Swarth. Condor, Vol. 7, Nos. 1, 2 and 3. Jan.-June, 1905.

Articles descriptive of Nesting Species, by F. C. Willard.

² See Habitat Group of Desert Bird-life. Opp. page 168. Vol. 9, Bird-Lore.

³ This and the following four sketches reprinted from the Newton (Iowa) Daily Journal, March, 1912. The descriptions are adapted from Bailey's Handbook.

ing and chuckling — “cutting their teeth ”— we called it, to each other.

When the sun strikes their glossy black plumage just right it is turned to white satin for an instant. After they become tired of their sport they descend for an evening lunch, and finally all go to roost in the cottonwood trees growing on the campus. A pretty picture, indeed, to see the setting sun lighting up these huge, white-limbed trees, studded with their families of black ghosts!

Next in interest to an Easterner come the Arizona *Pyrrhuloxias*. This peculiar name comes from the Greek and means flame-colored. They are relatives of the eastern grosbeaks and look like small parrots with their short, thick, yellow bills and raised crests. The face, throat, breast, thighs and lining of wings are a light rose red; the other parts a mellow gray color. Such a wonderful combination of colors, the exquisite rose-colored shirt front lighting up the soft gray coat, as the big yellow bill and raised crest thrown forward is seen coming towards you through the green, lace-like leaves of a creosote bush or pepper tree!¹

Next come the little vermilion flycatchers,² typical Mexican birds, and real gems for color. They look just like the small editions of the scarlet tanager, except for their crests; and they dart out from perches on the bushes to catch insects on the wing, just as the phœbes do. Would that we could persuade them to migrate to the north, where we could enjoy them occasionally, as we do the scarlet tanagers³ and cardinals.⁴ Scarlet, vermilion, cardinal, — what a display of shades! Could you tell them apart?

Of all the birds on our list the Roadrunner is doubtless the most unique; indeed, he is *queer*, and would certainly take first prize in the freak class at the Arizona state fair. He is about two feet in length, with a tail as long as his body, color

¹ See Illustration facing page 371, Handbook of Birds of Western U. S.—Bailey.

² Colored Illustration opp. page 147, Vol. 8, Bird-Lore.

⁴ Opp. pg. 39, Vol. 8, Bird-Lore.

above brown streaked with black, bare space around eyes blue and orange, feathers of head and neck bristle-tipped, eyelids lashed, crest a glossy, bronzy green, with white thumb marks on his tail,—his whole plumage coarse and harsh. Could you imagine such a looking creature? Try and think of a long striped snake on two legs, a feather duster on his head and another trailing behind; or a tall, slim tramp in a swallow-tailed coat, a black-and-blue eye, and a head of hair standing on end! There you are! All equally ridiculous looking.

To see our feathered what-is-it you must go to the high, dusty foothills as a rule, although he sometimes strays down into the suburbs. If you are driving he will run along down the road ahead of you, keeping ahead no matter how fast you drive. It is said he can outrun the swiftest horse. He belongs to the cuckoo family and is sometimes called ground cuckoo, lizard bird, or a chaparral cock; the Mexicans call him "little friend." As to diet, he eats mice, lizards, crickets, centipedes, crabs, snails, garter snakes and cactus fruit,—most any old thing. Perhaps this strange menu accounts for his looks!

Of Quails,¹ Arizona boasts four different species: the Masked Bob-white, so called because its face and throat are black; the Scaled Quail, whose bluish-gray feathers resemble scales; Gambel's Quail, the common valley quail of the west; and the Mearns Quail,² the United States form of the Masena Quail of Mexico. This is indeed a most striking quartet as you see them beautifully mounted in the University Museum; all of the greatest beauty of plumage, the Mearns being in addition quite odd looking. Its face is striped with black and white, its body is stubby and plump, the under parts dark brown, spotted with large, round white spots. Instead of raising its crest in the usual way it is said to spread it out laterally like half a mushroom. The Gambel and Scaled Quails can be found near the city, the others are found only

¹ See figures opp. pages 118 and 122, Bailey's Handbook and American Ornithology, Vol. 2, No. 1, Vol. 4, No. 1.

² See Condor, Vol. XI., pg. 39.

in the neighboring high mountains, where also, if one is fortunate, he may get a Wild Turkey.

Next in interest comes the doves, of which Arizona has five species. The Inca Dove is the most common, treading daintily along gravel paths, across front yards, barn yards, and often seen among chickens in the coop. As early as February 25 some were sitting upon their two pearl-like eggs in the pepper trees, while others were only selecting their brides, scrapping and fighting over them in the most undove-like fashion, batting each other with their salmon lined wings, and "pulling each other's hair," or rather feathers, with their small, sharp beaks. The feathers of this bird, especially when ruffled, are so arranged as to suggest scales. The Mexican Ground Doves are the smallest of all doves, really only half a dove in size, resembling nestling "turtle" doves. You might mistake one for a large gray mouse as it patters about on the ground hunting seeds; indeed they are so small and dear that you wish you could carry one about with you as a sort of living watch charm!

The White-winged Doves, — the Sonora doves of the natives — frequent the mesquite groves near water, where large flocks will gather to drink at evening, and where many meet their fate at the hands of the Mexicans and local "sportsmen."¹ The Band-tailed Pigeon is a large dove of general

¹See Vol. 12, page 275, Bird-Lore.

distribution in the west, where they live in the oak regions of the mountains, feasting upon acorns and wild berries. The Mourning Dove, with which we are all familiar, completes the quintet.

There is no complete, up-to-date list of the Birds of Arizona. Scott's list, published in the Auk in 1886-'88, is good as far as it goes. It lists the birds of three counties in southern Arizona, mentioning some 230 species. Visher (Auk 27: No. 3) adds thirty new species to that and gives fuller notes on many others. This briefly annotated list purports to bring Scott's list down to date. Swarth, in the Condor (Vol. 7, Nos. 1, 2, and 3), has given us a valuable and com-

plete local list of the summer birds of the Papago Indian Reservation near Tucson. Notes from the great stretches of country comprising the northern part of the state are fragmentary or lacking.

The following brief notes are offered supplementary to the above. They cover the three months from January 25 to April 25, 1912, and were made mostly in the north part of town or upon the plains one mile to the north. Mrs. James Wheeler, who resides two miles northeast of Tucson, has done considerable hunting among the water birds and has also mounted quite a few of them. I had the pleasure of examining them and am indebted to her for data concerning same. The fact that the writer was supposed to be an "invalid" explains the brevity of the notes. Thirty skins were made up and properly identified. The other forty species observed furnished data identical with what has been already published.

By February 20 the fruit trees were in bloom and the cottonwoods had small leaves. Gnats became numerous and attracted thousands of Ruby-crowned Kinglets, gnatcatchers and warblers. On February 23 we had a hard dust storm, which confused the migrating hosts greatly, and prohibited food-getting for most of the day. Consequently the birds were up late and were heard beating around the buildings all that night. It rained the rest of the night, but as the morning was warm and clear, the hosts were out early, fairly swarming everywhere. Brewer's Sparrows were extremely common and next in abundance to the Blackbirds. The first small lizard came on March 1st, and the cricket chorus thereafter resounded nightly. March 9th it stormed in the mountains and I took a much-bedraggled female Cedar Waxwing that evening. March 12th we had a hard rain, which later turned to snow. From the custom of scratching their heads it was evident that the birds were either puzzled over the weather or else assisting the molting process. March 30 we had another rain, and a snow in the mountains. I searched the north part of town carefully for more Waxwings, but

was unsuccessful in finding any. April 1st the cottonwoods were in full bloom and many of the trees infested with the larva of some moth, so much so as to completely defoliate the trees. Although I watched carefully, not one of the thousands of migrating birds were seen to eat the larva, although the abundant House Finches often picked the seeds from the "cotton."

Pelecanus erythrorhynchos.—White Pelican.

Three shot by local hunters March 29th.

Marila affinis.—Lesser Scaup Duck.

Common March 16th in the Santa Cruz reservoir. So tame that one could row among them.

Clangula clangula americana.—Golden-eye.

Recorded as new species for the state. Condor, XIV; 154.

Erismatura jamaicensis.—Ruddy Duck.

Juvenile mounted by Mrs. Wheeler, March 16th.

Grus canadensis.—Little Brown Crane.

Recorded by myself as new to the state. Condor, XIV; 154.

Steganopus tricolor.—Wilson's Phalarope.

Several mounted April 7th by Mrs. Wheeler.

Recurvirostra americana.—Avocet.

Found common October 12, 1911, by Mrs. Wheeler.

Numenius americanus.—Long-billed Curlew.

Taken October 12, 1911, by Mrs. Wheeler.

Callipepla squamata squamata.—Scaled Quail.

Found common at Oracle, elevation 4500 feet on west slope of Catalinas, by Mrs. Wheeler.

Scardafella inca.—Inca Dove.

Abundant about the streets of Tucson, while not a specimen of *Chaemepelia passerina pallescens* was seen during my stay. Mr. Willard reports the opposite from Tombstone; viz. that the Inca Dove does not nest there, while the Ground Dove is common.

February 25—Nest building; first eggs found.

March 10—A nest with large young.

April 10—Many other doves just starting to build.

Cathartes aura septentrionalis.—Turkey Vulture.

First seen February 1, soaring high. Next seen March 20; then April 10, after which they became common. We were told by several different parties that "when the vultures come they drive the ravens away."!

Falco columbarius columbarius.—Pigeon Hawk.

One seen darting through the bushes of the campus February 18.

Buteo borealis calurus.—Western Red-tail.

Quite common during our whole stay, beating over the plains. I prepared two skins, one a mature male in the dark chocolate plumage, and the other an immature male, light phase. These had been shot by boys. The stomach of the first contained a squirrel, which had been beheaded, neatly "quartered" and taken in five swallows as follows: four entire legs, to one of which the skin hung, and the viscera in a ball. The feet and roof of mouth of both hawks were full of cactus spines.

Sphyrapicus thyroideus.—Williamson's Sapsucker.

One seen March 3 on the campus.

Chordeiles acutipennis texensis.—Texas Nighthawk.

Seen only once, March 17th.

Aeronautes melanoleucus.—White-throated Swift.

Common everywhere during April.

—————.—Hummingbird.

One seen February 14, had large, white patch on side of head, easily seen from a distance of forty feet. I thought the gorget to be purple, but only had one flashing glance at it. Upper parts green. It was evidently either a young male Broad-billed Hummingbird (*Tache latirostris*) or adult male White-eared (*Basilinna leucotis*), in either case, a rare seasonal record for that altitude. Although the writer is unacquainted with Hummingbirds in general, the description fits the above two birds only, with evidence in favor of the latter; the evidence, however, is given for what it is worth.

Pyrocephalus rubinus mexicanus.—Vermilion Flycatcher.

Common everywhere during our stay, the young males molting and consequently beautifully blotched with vermilion. See migration report, Bird-Lore IX., 265.

Nucifraga columbiana.—Clarke's Nutcracker.

Mr. Willard has always found them to be very rare in the high mountains. Mr. Lusk, through Mr. Visher, reported them "occasionally abundant."

Molothrus ater obscurus.—Dwarf Cowbird.

First seen February 18. Mr. Visher reported May 5.

Agelaius phoeniceus sonoriensis.—Sonora Red-wing.

Two specimens I took were identified by Mr. J. Grinnell. Thousands of "blackbirds" nested in the bushes and trees in town each night, and I know of at least one man who regularly frightened them away with a shotgun on account of their noise and filth.

Icterus cucullatus nelsoni.—Arizona Hooded Oriole.

Arrived March 21.

Icterus bullocki.—Bullock's Oriole.

Arrived March 23.

Carpodacus mexicanus frontalis.—House Finch.

Their sweet warbling song heard from dawn until dark. February 9, commencing to build. March 20, birds setting everywhere, nests built about porches, on meters, and in cacti. April 6, nest with young about half grown.

Poæcetes gramineus confinis.—Western Vesper Sparrow.

First migrants arrived March 3.

Zonotrichia leucophrys gambeli.—Gambel's Sparrow.

Abundant everywhere, the young more common than the adults. Specimens taken after March 1 were molting on head, neck and legs. They gleaned the ground grain from the chicken coops and picked the leaf tips from the privet hedges for a relish.

Melospiza melodia montana.—Mountain Song Sparrow.

Noted February 21 and March 17 along the river. But a careful lookout failed to reveal *M. m. fallax* at any time.

Melospiza lincolni lincolni.—Lincoln's Sparrow.

Quite common during our stay, up till April 10. Four skins were taken February 20.

Cardinalis cardinalis superbus.—Arizona Cardinal.

Occasionally seen in the underbrush along the river; only noticed three males in town during the period.

Passerina amœna.—Lazuli Bunting.

One seen April 15, near San Xavier Mission.

Calamospiza melanocorys.—Lark Bunting.

Abundant in large flocks. The young molting males were handsomely blotched with black and white.

Bombycilla cedrorum.—Cedar Waxwing.

An adult female taken March 9 during the storm. Said to be occasionally driven out of the mountains by storms, although Mr. Willard tells me he has never seen a Cedar Waxwing in Arizona. My bird was alone, was bedraggled and half starved, for it had literally stuffed itself with pepper seeds. The whole digestive tract was crammed with these seeds, and needless to say, quite fragrant. The only specimens displayed in the museum are three in number, and labelled as follows:

Female, Yuma, June 4, 1899.

Male, Tucson, May 13, 1887.

Female, Tucson, May 14, 1887.

Lanius ludovicianus excubitorides.—White-rumped Shrike.

Rather common. One was seen to attack an Inca dove, drag it to a hedge, and decapitate it. I watched the body until it was carried away by a raven.

Dendroica coronata.—Myrtle Warbler.

One seen January 28.

Deadroica auduboni auduboni.—Audubon's Warbler.

Abundant. The February birds were all in dull, streaked winter dress, the March birds molting.

Geothlypis trichas subsp.—Yellow-throat.

First seen March 17. Mr. Willard writes me that the "early spring birds appear to be migrants on their way north and different from the breeding ones."

Toxostoma curvirostre palmeri.—Palmer's Thrasher.

Abundant. In full song and starting nest building when we arrived January 25. Said to be quite harmful in the fruit season; at one ranch some 200 were shot one spring in the strawberry and dewberry patches. Some fifteen nests were found in an area half mile square adjoining town. All were in the cholla cacti and contained usually three eggs; though often only two. March 5, two tiny black-haired young, although most of the nests contained complete sets. Their nests are large and bulky, average inside measurements 3.5x4.00x3 inches deep. Besides fine stems and rootlets the nests often contained hair, feathers, and old rope and twine. One bird taken had its leg off at the knee joint and was quite lousy.

Toxostoma bendirei.—Bendire's Thrasher.

Not so common as Palmer's. April 3d, first set of two eggs, incubation started. The average inside measurement of nests were 3.5x3.5x2.5 inches deep, and they contained string, cotton, hair, cheesecloth, chips of newspaper and a few feathers. The stomach of the one specimen taken contained the elytra of small black beetles, white larvæ and some unknown pupæ.¹

Heleodytes brunneicapillus cousei.—Cactus Wren.

Nesting commonly in the cacti out on the mesa. April 6, nest with three young ready to fly; nest with four young about five days old; nest with three eggs fresh. The sides of telephone poles and roofs of buildings are favorite vantage points.

Salpinctes obsoletus obsoletus.—Rock Wren.

Common on rocky hillsides. One came regularly to search the woodpile for grubs after I had split the wood each morning. I was told of a nest of this species that had three nails built into it!
Regulus calendula calendula.—Ruby-crowned Kinglet.

Became abundant after February 15; quite common before this date.

Poliioptila carulea obscura.—Western Gnatcatcher.

This form, as well as *P. plumbea*, were common at all times roving over the mesa. The stomach of one specimen was full of gnats, and its plumage full of lice.

¹For further accounts of the nesting of Arizona Thrashers see Condor, Vol. XI., pg. 49.

Planesticus migratorius popinquus.—Western Robin.

Only a few were seen in town during our stay. They were sitting quietly in the trees.

Sialia currucoides.—Mountain Bluebird.

A roving flock seen February 19. Irregular winter visitant.

AN UNUSUAL FLIGHT OF WARBLERS IN THE MISSOURI VALLEY.

BY T. C. STEPHENS

An especially interesting flight of warblers was noted at Sioux City during the spring of 1913. The wave apparently first reached this point on May 8, but was more marked on the 9th and reached its maximum on the 14th and 15th. My records show that there had been a good deal of rain and cloudy weather prior to the arrival of the wave. May 3 was mostly cloudy, and was followed by three clear days. May 7 was cloudy and rainy; the 8th and 9th were cloudy and cold with some rain. On the 10th it cleared up but was still cool. By the 13th it was still clear, but was cloudy again on the 14th and 15th with rain both nights. An analysis of the weather conditions cannot be further attempted for more complete data covering a greater extent of the Missouri valley would be required to reach any significant facts. It will be noticed, however, that the warblers were present in considerable numbers during both clear and cloudy or cool weather.

The records when arranged as in the accompanying table show at a glance the wave as it came under the writer's observation. To many it may seem quite meager, but nothing like it has been witnessed by the writer in the five years of his observations at this point. The abundance of these small birds with bright colors attracted the attention of many people who were not accustomed to notice birds. Some more or less regular migrants of other years are singularly absent from the list, viz, the Palm Warbler, and the Mourning Warbler. The list is made up of records on both sides of